

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

21-085

CHEMISTRY REVIEW(S)

DIVISION OF SPECIAL PATHOGEN AND IMMUNOLOGIC DRUG PRODUCTS
Review of Chemistry, Manufacturing, and Controls

NDA #: 21-085

CHEM. REVIEW #: 1

REVIEW DATE: 12/9/99

SUBMISSION/TYPE

DOCUMENT DATE

CDER DATE

| | | |
|----------------|----------|-------------|
| ORIGINAL | 12/9/98 | 12/11/98 |
| Amendment (NC) | 1/14/99 | (fax) |
| Amendment (BC) | 2/23/99 | 2/25/99 |
| Amendment (BC) | 7/8/99 | 7/9/99 |
| Amendment (BC) | 7/9/99 | 7/12/99 |
| Amendment (BC) | 9/8/99 | 9/9/99 |
| Amendment (BC) | 9/27/99 | 9/29/99 |
| Amendment (BC) | 10/25/99 | 10/26/99 |
| Amendment (NC) | 11/2/99 | 11/3/99 |
| Amendment (BC) | 11/19/99 | 11/22/99 |
| Amendment (BC) | 12/8/99 | 12/9/99 (2) |
| Amendment (NC) | 12/9/99 | 12/10/99 |

NAME & ADDRESS OF APPLICANT:

Bayer Corporation Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516
(203) 812-5172

CONTACT:

Andrew Verderame
Associate Director, Regulatory Affairs

DRUG PRODUCT NAME

Proprietary: Avelox Tablets
Established: moxifloxacin hydrochloride tablets
Code #: BAY 12-8039 (moxifloxacin hydrochloride)

PHARMACOLOGICAL CATEGORY/INDICATION: Antibacterial.

DOSAGE FORM: Tablets.

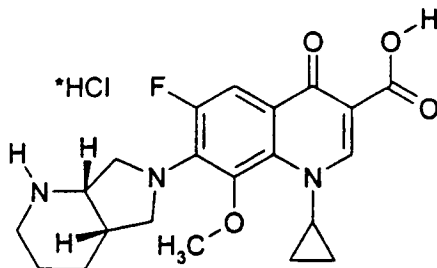
STRENGTHS: 400 mg

ROUTE OF ADMINISTRATION: Oral

Rx/OTC: Rx

**CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA,
MOLECULAR WEIGHT:**

Moxifloxacin Hydrochloride, $C_{21}H_{24}N_3FO_4 \times HCl$, MW = 437.9
Monohydrochloride salt of 1-cyclopropyl-7-[(S,S)-2,8-diazabicyclo[4.3.0]non-8-yl]-6-fluoro-8-methoxy-1,4-dihydro-4-oxo-3-quinoline carboxylic acid



CAS 151096-09-2 (moxifloxacin)
CAS 186826-86-8 (moxifloxacin hydrochloride)

SUPPORTING DOCUMENTS:

DMFs Type III (see list under Container/Closure in the Drug Product section)

RELATED DOCUMENTS:

N/A

CONSULTS:

1. Trademark review (complete, acceptable 3/11/99).
2. Site inspection (complete, acceptable 8/18/99).
3. Environmental assessment (categorical exclusion claim, acceptable).

REMARKS/COMMENTS:

NDA 21-085 provides for moxifloxacin hydrochloride tablets (Avelox Tablets), a new fluoroquinolone (8-methoxy) antibiotic for treatment of mild to moderate community acquired pneumonia, acute sinusitis and acute bacterial exacerbation of chronic bronchitis. The review of the CMC portion of the NDA has revealed a number of deficiencies, which were conveyed to the applicant (Bayer Corporation Pharmaceutical Division). These questions and comments were adequately addressed by the applicant in the subsequent amendments to the NDA and are discussed in detail in the appropriate portions of the review. The comprehensive list of all comments and questions that were communicated to Bayer is attached in the end of this review. The proprietary and established names for the drug product were found acceptable by the Labeling and Nomenclature Committee on 3/11/99. The following CMC Phase IV commitment will be included in the action letter for this NDA: "Bayer will re-evaluate the drug substance specifications after 2 years of commercial production"

CONCLUSIONS & RECOMMENDATIONS:

The NDA submission and amendments provide adequate information on the chemistry, manufacturing and controls for the production of Avelox (moxifloxacin hydrochloride) Tablets. The related GMP and product specific inspections of the manufacturing facilities have been completed and found satisfactory. From the chemistry, manufacturing and controls viewpoint, the NDA is recommended for approval.

/S/

Dorota Matecka, Ph.D.
Review Chemist, HFD 590

/S/

Norman R. Schmuff, Ph.D.
Team Leader, HFD-590

2/22/2000

cc: Org. NDA 21-085
HFD-590/Division File
HFD-830/DD/CC Chen
HFD-590/TL/NSchmuff
HFD-590/Chem/DMatecka
HFD-590/MO/JPowers
HFD-590/Pharm/AEllis
HFD-590/PM/VJanssen
HFC-130/JAllenHF